PCV72
COST EFFECTIVENESS ANALYSIS OF APIXABAN COMPARED TO ORAL ANTICOAGULANTS IN THE PREVENTION OF THROMBOEMBOLIC EVENTS IN PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION IN GUATEMALA IN 2014

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BACKGROUND: Atrial fibrillation (AF) is associated with development of thromboembolic events [1]. The standard therapy used in patients with non-valvular atrial fibrillation (NVAF) with risk of stroke is Warfarin. There are new oral anticoagulants (NOACs) that also are recommended [2]. **OBJECTIVES:** Evaluate cost-effectiveness of Apixaban compared to Oral Anticoagulants in the prevention of thromboembolitic events in NVAF patients from perspective of Guatemala's Public HealthCare System (IGSS). **METHODS:** A Markov decision-analysis model was designed using data from clinical trials [3,4,5] (indirect comparisons, where appropriate) to evaluate lifetime costs and quality-adjusted life-years (QALY) of Apixaban (5mgBID) in comparison to Rivaroxaban (20mg/day) and Warfarin (5mg/day). IGSS used Warfarin and Rivaroxaban in NVAF patients. The health states evaluated were: ischemic and hemorrhagic strokes, hemorrhagic events (intracranial hemorrhage, other major bleeds and clinically relevant non major bleeds), systemic embolism (SE) and myocardial infarction (MI). The model population was a hypothetical cohort of 70-year-old NVAF patients, suitable to Vitamin K antagonist treatment. Only direct medical costs were considerate and taken from IGSS databases from 2014 [6,7]. Outcomes were: overall cost, QALY and ICER. Cost and health outcomes were discounted at 5.0% per year, using a lifetime horizon. **RESULTS:** Apixaban is the only therapy that prevents and improved all clinical outcomes. Apixaban prevented: 3 Ischemic Strokes, 14 hemorrhagic strokes, 71 hemorrhagic events, 1 MI and 3 SE in comparison to Warfarin. Overall costs in a lifetime period per patient were US$9,190; US$11,763; US$12,045 for Warfarin, Apixaban, and Rivaroxaban respectively. Apixaban earned the highest QALY 5.740; Rivaroxaban reported 5.699 and Warfarin 5.570. Used Warfarin as a base, the ICER of Apixaban and Rivaroxaban were US$15,135 and US$21,961 respectively. **CONCLUSIONS:** Neither Apixaban nor Rivaroxaban are Cost-Effectiveness therapies in comparison with Warfarin according Guatemala's 3GPB (US$10,400). Among the NOACs currently used by IGSS, Apixaban is shown to be a cost-saving therapy in comparison to Rivaroxaban.

PCV73
COST EFFECTIVENESS OF APIXABAN FOR STROKE PREVENTION IN NON VALVULAR ATRIAL FIBRILLATION IN THE ECUATORIAN PUBLIC HEALTHCARE SECTOR

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OBJECTIVES: To assess the cost-effectiveness of apixaban for the prevention of stroke in patients with non valvular atrial fibrillation (NVAF) from the payer's perspective of the Ministry of Public Healthcare in Ecuador (MPHE). **METHODS:** A lifetime Markov model was developed to evaluate the pharmacoeconomic impact of apixaban compared to aspirin, warfarin, dabigatran in different dosage (110 mg and 150 mg) and rivaroxaban, in patients with NVAF and risk of stroke. The clinical events considered were: stroke, bleeding, myocardial infarction (MI), cardiovascular hospitalization (CVH), and treatment discontinuation (TD) of which the data was obtained from indirect comparisons, published literature and input data from a local expert panel. All costs information 2014 (drug and adverse events) was obtained from public data sources of the MPHE. **RESULTS:** In a Cohort of 1000 patients with NVAF, apixaban avoided 51 ischemic stokes and 3 bleedings vs. aspirin, 4 ischemic stokes, 28 bleedings and 11 related deaths vs. warfarin, 21 ischemic stokes and 4 related deaths vs. dabigatran 110mg, and 11 ischemic strokes, 28 bleedings and 5 related deaths vs. dabigatran 150mg and 7 ischemic stokes, 7 bleedings and 6 related deaths vs. rivaroxaban. Apixaban was associated with 0.324 life years (LYG) and 0.0.273 quality-adjusted life-years (QALYs) gain when compared to aspirin, 0.181 LYG and 0.190 QALYs gain compared to warfarin, 0.123 LYG and 0.106 QALYs gain when compared to dabigatran 110mg, 0.081 LYG and 0.07 QALYs gained compared to dabigatran 150mg and 0.059 LYG and 0.048 QALYs gained compared to rivaroxaban. Apixaban was more effective and less costly (dominant) than dabigatran 110mg and dabigatran 150mg and cost-effective alternative compared with aspirin, warfarin and rivaroxaban. **CONCLUSIONS:** Apixaban is a cost effective or dominant alternative compared with treatment options for the prevention of stroke in patients with NVAF from the payer's perspective of the Ecuadorian Ministry of public healthcare.

PCV74
COST-EFFECTIVENESS ANALYSIS AMONG PATIENTS WITH DIABETES MELLITUS OR CARDIOVASCULAR DISEASE RECEIVING SECOND-LINE TREATMENT WITH INTENSIVE DOSES OF SIMVASTATIN ATORVASTATIN AND ATORVASTATIN-EZETIMIBE COMBINATION IN GENERAL PRACTICE

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OBJECTIVES: Current studies have recommended intensive doses of statins in patients with diabetes or cardiovascular disease. In general practice, standard dose statins, which used to be effective treatment may not be good enough. Furthermore, the cost-effectiveness studies have not concerned about this problem that may be an important factor in cost-effectiveness analysis. The purpose of this study was to determine the cost-effectiveness of intensive doses of Simvastatin, Atorvastatin, and Atorvastatin-Ezetimibe combination among high-risk CHD outpatients in second-line treatments. **METHODS:** A cross-sectional retrospective study in high-risk CHD outpatients was performed at the Chandrubeksa Hospital Medical Department of the Royal Thai Air Force, Thailand. Data collection was done by computerization combined with reviewing medical record during 6 months. The incremental cost-effectiveness ratio (ICER) was determined for the cost-effectiveness analysis and comparisons of the three groups with intensive doses (Simvastatin 40 mg/day and Atorvastatin 20-40 mg/day monotherapy or combination therapy with Ezetimibe 10 mg) on the provider perspective. The direct medical costs were computed by micro-costing method (Reference price in 2014). The effectiveness was determined by the percentage differences in LDL-C reduction. **RESULTS:** From 250 patients with high risk CHD treated by intensive doses. Sixty-seven, 145 and 38 patients took Simvastatin, Atorvastatin and Atorvastatin-Ezetimibe combination, respectively. The outcome determined by the percentage differences LDL-C reduction showed that Simvastatin had the lowest effectiveness comparing to other groups (mean ± SD; -13.8 ± 32.3%, -28.0 ± 24.8%, and -37.8 ± 17.2%, p 0.0001 respectively). ICER determination showed that the intensive doses treatment of Atorvastatin had the best result (ICER = 326.91 THB) whereas than of Atorvastatin-Ezetimibe combination was poorer (ICER = 732.44 THB). **CONCLUSIONS:** Comparison of intensive doses Simvastatin, Atorvastatin, and Atorvastatin-Ezetimibe combination regimens in second-line treatment among high-risk CHD outpatients showed that intensive dose Atorvastatin regimen was the most cost-effectiveness.

PCV76
SYSTEMATIC REVIEW OF RECENT PHARMACOECONOMIC EVALUATIONS RELATED TO GENOTYPE-GUIDED THERAPY IN PATIENTS AT HIGH RISK FOR THROMBOTIC EVENT

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OBJECTIVES: Utilizing previously published selection criteria1, identify and evaluate current literature that is focused on cost-effectiveness of genotype-guided medication programs for patients at high risk for a thrombotic event. The aim of study is to provide the scientific community with a comprehensive, yet brief overview of studies that could inform future development of personalized medicine research within this subset of cardiovascular disease. **METHODS:** The literature search was conducted within PubMed and Web of Science databases. The objective was to identify studies published from January 2008 (conclusion period of Vegtar's research) to October 2014 that also included **the search term "pharmacogenetic" and the term "pharmacoeconomic"**. **RESULTS:** Ten articles met inclusion criteria. Genotypes CYP2C19, CYP2C9, VKORC1, KIF6 were used alone and/or in combination within differing patient populations. Medication programs included (number of papers): Warfarin (4), Clopidgrel (including other in-class agents: 2), phenprocoumon (1), atorvastatin/pravastatin (1) and Dabigitran (and other in-class agents: 1). The following types of economic evaluations were utilized either alone or in combination: CEA, CUA, CUR, CBA, Threshold Analysis, ICER, ICUR, EA, and INB. Outcome measures and sensitivity analysis were variable and did not always reach thresholds of significance within the overall study population. **CONCLUSIONS:** Comprehensive study evaluations were lacking due to inconsistent methodology. Specific study guidelines for the field of genotype-guided therapy are needed. With multiple blockbuster medications reaching patent expiry, the cost-effectiveness and sensitivity analysis from previous years warrant a second evaluation. It is anticipated that genotype-guided treatment may be shifting to a cost-effective option for only the treatment-resistant, or smaller populations with a differentiated risk status. This is in contrast to selecting genotype-driven therapy as an initial option for the masses of patients diagnosed with thrombotic event risk in a more traditional "treat everyone the same" algorithm. 1Stepfan Vegter et. al, "Pharmacoeconomic Evaluations of Pharmacogenetic and Genomic Screening Programmes" Pharmacoeconomics 2008: 26(7) 569-587.

PCV77
COST EFFECTIVENESS OF AN ANTICOAGULANT CLINIC AFTER INTRODUCTION OF NOACS FOR STROKE PREVENTION IN ATRIAL FIBRILLATION PATIENTS IN THE UNITED STATES

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OBJECTIVES: To assess cost effectiveness of anticoagulant clinics after FDA approval of New Oral Anticoagulants (NOACs) for preventing of ischemic stroke in Atrial Fibrillation (AF) patients in the United States. **METHODS:** A decision tree was built using outcomes data obtained from randomized clinical trials and publicly available cost data. The analysis compared the cost effectiveness of 150mg dabigatran twice a day taken with no anticoagulation clinic monitoring versus warfarin titrated to dose based upon anticoagulation clinic monitoring. The analysis was for one year using an institutional perspective. The population in this analysis was a cohort of AF patients, ≥ 65 years old, with a mean CHADS2 score of 2, and no contraindication to anticoagulation. The primary outcomes measured were cost in US$ and Quality Adjusted Life Year (QALY). All data were subject to sensitivity analyses. **RESULTS:** The base case analysis showed that changing from warfarin to dabigatran without monitoring resulting in an additional $251,000 per QALY saved. Sensitivity analyses found that the model was sensitive to utilities assigned to outcomes and the probability of death. **CONCLUSIONS:** NOACs claim to reduce the need for anticoagulation monitoring, thereby competing with anticoagulation clinics. This study showed that substituting NOACs for warfarin in this population was not within acceptable willingness to pay values for new therapies. It is likely that anticoagulation clinics will remain a cost effective option in the near future.

PCV78
THE COST-EFFECTIVENESS OF DABIGATRAN ETEXILATE COMPARED WITH EDOXABAN IN THE TREATMENT OF ACUTE VENOUS THROMBOEMBOLISM IN THE UK

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